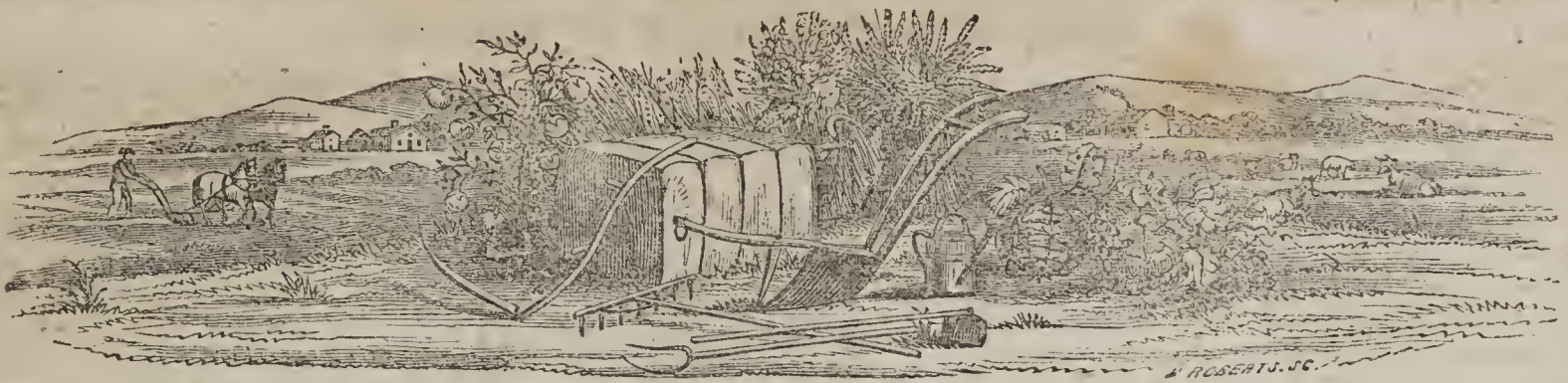


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FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, MECHANICS, DOMESTIC AND RURAL ECONOMY.

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Premium Essay on Fencing.

Read before the Second Annual Fair of the Georgia and Alabama Agricultural Society.

BY B. A. SORSBY, COLUMBUS, GA.

We hail the formal introduction of this subject to the notice of the planting interest of the South, as an evidence of the progressive spirit of the age in the improvement of the various interests connected with agriculture, as the harbinger of some fit substitute for the fence now almost universally used in the Southern and Western State.

There is in no department of husbandry so great a call for improvement as in that of fencing; and we are inclined to think it is, by far, a heavier drawback upon the planter's profits than any other expense he has to contend with.

The old adage that "necessity is the mother of invention," was never more clearly verified than in fencing in England and many parts of Europe. And we have sometimes had reason to congratulate ourselves that we have been driven by nature, and our own improvidence, to resort to extremities—substi-

tutes being frequently more acceptable than the originals. We instance the hedges and walls of Europe as being almost the only barriers now existing against stock, and as having been cheaper for many years than the original rail or board fence. These, as well as all other modes of fencing, are being abandoned entirely in some parts of England and the Continent, and also in some of our Northern States, under the protection of certain statutes, which impose heavy penalties for depredations committed by stock. To guard against which, shepherds, with their dogs, are employed to keep them in their proper limits.—This may be judicious policy in countries densely populated—where farmers rarely own more than fifty acres, and land worth from fifty to one hundred and fifty dollars per acre. But in this happy land of ours, (the South and West,) where plenty abounds in everything pertaining to agriculture, in the greatest abundance, years, if not centuries, will pass away before we shall be driven to such extremes.

It is not our purpose in this essay, to submit to the planting public any method of fencing worthy of being universally adopted, but to suggest those only which, from the locality of the land and materials at hand, would seem to be the most economical and effective.

The rough, unsightly looking fence constructed of rails, and of zigzag form, which detracts so largely from the locality of the landscape, and so much abused by Capt. Hall, the English tourist, for its uncouth and loathsome appearance—and as costing the state of Pennsylvania as reported by Nicholas Biddle, forty millions of dollars, besides being annual tax upon the farmers of the State of ten

millions of dollars—is nevertheless a very effective barrier against all stock when properly built. And where timber is abundant and convenient, as it is in most all new countries, is decidedly the cheapest fence that can be constructed; more especially where post oak and chestnut rails can be had at a cost not exceeding thirty cents per rod, including construction.

Rail Fences. The cost of building an ordinary rail fence, seven to the pannel, at the North, is computed at one dollar per rod, under favorable circumstances. We should think it might be done at the South for nearly one-fourth that money, estimating the cost of splitting and putting up the rails at one dollar per hundred, (the timber furnished,) the usual price. To test the value of the above, we will set down one hundred and fifty rails as a day's work for a hand to cut and split, and that it takes him half the next day to cart them, which he will be able to do at the distance of a half to three-fourths of a mile, and that he lays them up (twelve to the pannel) in the remaining part of the day. The account will then stand thus, at the following prices:

One hand, two days, 50 cents...	\$1 00
Carting,	25
Timber,	25
	<hr/>
	\$1 50

These rails will make five and one-third rods of fence, allowing five feet crook to the worm, which will be equal to twenty-eight cents the rod. Allowing one-fourth of this cost, or three rails, to be added in repairs (to keep in order) every five years—and at the expiration of fifteen years it will have cost fifty-six cents (double the original cost) per rod. At thirty years, eighty-four cents, and at

fifty years, one dollar and twenty-one cents.

This investigation has been entered into merely for the purpose of showing the relative value of other modes of fencing of less general use.

Hedges (live) have been, and will continue to be employed with advantage and economy in all sparsely timbered countries—more particularly in the far West, where nature had like to have been unmindful of man's wants in her clearing operations. We object to their use, however, for the following reasons:

1st. They will not prosper or flourish well on poor or thin soil. 2d. They require clipping or pruning at least once a year until abandoned. 3d. The forest precludes their being used as outside fences. 4th. They occupy, at an advanced age, too much ground. 5th.—They will not grow in wet soils nor across branches. 6th. They sap the soil with their roots and shade for many feet on each side. 7th. They throw out innumerable sprouts from their roots, as they are broken by the plow, &c., 8th. They furnish harbors for birds, snakes, and many other reptiles. 9th. They require cultivating in order to keep down weeds, briars, &c. 10th. They are frequently imperfect at bottom, particularly those made of the Cherokee rose—making it necessary to keep up a low fence to keep out pigs, &c. We have never seen any but those made of this material—none of which were perfect to any great length—therefore did not answer the purpose. They are also subject to be killed by the stern frost king.

Our acquaintance with the Osage orange (*maclura*) tree, authorizes us to speak in the highest terms of it for such purposes, when a hedge is once set. Its spines are so exceedingly thick and sharp that the cold chills involuntarily seize us upon the nearest approach to its protuberances. We learn that the seed should be planted in the fall, as they do not vegetate readily. We tried about fifty last May, and that is the last we have seen of them. We presume our seed were not good, as they have been known to come up at this season. In one quart there are said to be eight thousand seed. The plants may be transplanted to the hedge in the spring, when about fifteen months old. They will succeed better at two years old. If not transplanted at a year old, they should be headed down within two inches of the ground, which should be repeated annually, either in the nursery or hedge for

two years—giving more length to the stubble at each succeeding operation.—The plants can be propagated from the roots, in lengths from three to four inches, placed in well pulverized earth, with one end slightly exposed to view. As an ornamental hedge it would be objectionable from its deciduous character.

Cost. Professor J. B. Turner, of Illinois College, has miles of fencing of this shrub—having been engaged in rearing the plants about fourteen years. He says: "It will not cost more than twenty-five to fifty cents per rod to make the best fence in the whole world for all farming purposes." We will take that as costing fifty cents as the most formidable barrier, as the basis of our calculation in expenses in keeping up, &c., for fifty years, as shown for the rail fence. If the hedge should be trimmed on top, which would not be practicable long, it would be worth, including the sides, all of fifteen cents a rod. But we will compute it at ten cents—including the cost of cultivation necessary to keep it in a healthy and growing condition, and we have at the end of fifty years, five dollars—original cost, fifty cents, total, five dollars and fifty cents per rod, against one dollar and twenty-one cents for the rail fence.

Ditching, and fencing on the embankment, with a post and board fence, has been urged upon our attention as being worthy of adoption. Let us investigate this for a few moments. In order to form an embankment of twelve inches in height, after the same has been leveled, and make the ditch available in part as a barrier, it should be three feet wide at bottom. Upon this embankment, posts might be placed or set, three and a half feet apart, with a base board of the same length one foot wide, and two other boards six inches wide nailed thereto.—This we will admit makes a pretty fair fence for quiet stock. But as to the cost and its feasibility. A ditch of the above dimensions cannot be cut through cleared land for less than twenty-five cents per rod—if through the forest, thirty-five cents. The plank, thirty-three cents—posts of good materials, with one side faced, and set to places, eight cents—nailing on plank, and nails, two cents, and we have—

For ditching, say,	25
Boards,	33
Nailing on boards,	2
Furnishing and setting two posts at eight cents,	16

The cost of keeping up such a fence depends upon contingencies. If the land upon which these ditches are cut is at all rolling, they would require cleaning out, in places, perhaps two or three times a year, either from the filling in of extraneous matter, or caving in of its banks, for which there is no remedy. Our great aversion to open ditches, even for draining, is so inveterate that we never adopted them for that purpose except where under-drains were not practicable. This fence also will occupy at least eight feet of land before it caves any, and if the corn or cotton rows should point towards the ditch, a mule will not approach it by three or four feet, believing that some enemy is secreted there, or from the insidious nature of its banks, he may be buried alive. Admitting that the posts, nails and boards of this fence will not exceed in repairs, one hundred and fifty per cent. for fifty years—equal to one dollar and thirty-seven cents—and eight cents per rod, annually, for cleaning out the ditch—do. four dollars and twenty-five cents—total, five dollars and fifty-two cents.

There are two other modes of fencing which are well worth our attention, to wit: The post and board fence, without the ditch, and the wire fence.

Board Fence. Where boards or plank can be had at one dollar per hundred, the cost of a plank fence, (per rod) with a base board twelve by one inch, and three other plank six by one, with two posts four and a half feet above ground, and the plank nailed on lengthwise, would stand thus—

41 and 3-12 feet boards, say,	41
2 posts at 8 cents, including carting and setting	16
Nailing on boards, and nails,	5
For repairs to same for fifty years, would require,	62
Two sets of posts, equal to,	32
Replacing plank once,	41

73 \$1 35

Labor thrown in for liberal estimate in boards. The base board to be nailed six inches above ground, which space is to be supplied with earth by running four furrows on each side with a turning plow, which would not exceed one cent to the pannel. We have a fence similar to this that has been standing fourteen years. Posts made of the heart of dead pines, and the plank not selected—put up without being dressed—and we have had no occasion yet to replace a post or

Plank, and believe, by a little bracing of the posts, they may be made to stand three or four years longer; and that 8-10ths of the plank will last twelve or fifteen years longer. The fence has occasionally received a coat of white wash, composed of lime, water and a little salt.—The posts are set entirely on one side of the fencing, (inner,) but for plantation use we should alternate—setting every other one outside—and the plank so nailed on as to have the joints break on every other post, alternately, as they are put up.

If a little extra pains were taken in procuring rich lightwood, locust, chestnut, post-oak and cedar posts, with the ends reversed and charred, and good heart plank, such a fence would last, with some slight repairs, forty or fifty years. Posts should never be set in the ground when green, or with the bark on.

Wire Fence. There is but little variation in the construction of these fences; and we incline to the opinion, when properly put up, answer all the purposes of any other good fence, and are much cheaper. The usual mode of building them at the North, where they are much used, is to set posts (about 5 by 5) a rod apart, and from four to four and a half feet above ground, to which six or eight strands of wire of numbers 8, 9, 10 or 11 are attached, horizontally, by means of staples made of the same wire, or by boring holes through the posts, through which the wire passes, and plugging with wooden pins. The latter plan is objectionable, for the reason that other posts cannot be replaced without much inconvenience and trouble.

The corner and other straining posts are about eight inches square—the lower end framed into a sill five or six feet long and three feet under ground, with a brace extending two feet up the post. Small wires are then used as stays or supports to the strands, by being placed at intermediate spaces of two or three feet along the entire length of the fence. They are first made fast to the upper strand passing them once or twice over it—then passing to the next strand below, the same operation is repeated, and so on, until the bottom wire is reached, when it is made secure.

These fences are built with numbers 10 or 11 wire, at an expense of about fifty cents a rod. A base board of about ten or twelve inches in width is sometimes used, to the exclusion of some of the wires—and serves the purpose of a brace

to the post, as well as to keep out pigs, &c. We have recently constructed a few rods of fencing on this principle, in which we used cedar posts, with a cap or crown plank as well as base board; the former six, the latter twelve inches wide—both of which were nailed to the post before the wire was put on. The upper plank being nailed on top of the post, and the lower one three inches above ground, which space was to be supplied by a plow with dirt. The height of this is much more clearly defined by the top plank than if wire had been used. The plank employed in this fence was eighteen feet long—having been previously sawed for other purposes, at which distance the posts are set.—At the intermediate space of nine feet, other posts were planted, two feet long, only extending fifteen inches above the ground, to which the bottom plank is also nailed. This renders the whole structure firm and immovable, and supercedes any further bracing of corner posts in forming angles, &c. As further support to the top plank, and to answer the purpose of stay-wires, five palings, one by two and a half inches, are placed upright to each pannel, equi-distant, and are sustained in this position by cutting a mortise in the lower end of the paling one inch wide and two deep, which lets down on the top edge of the board, and of sufficient length to extend to the under side of the plank above, to which it is nailed from the upper side.

Through these palings small holes are bored, at the distance agreed upon, for the reception of the wire, which is confined to the surface of the posts by staples made of the same wire. The wire was made tight by the use of a hand vice, which held the wire, and which was also confined to a lever, and with one hand the full length of the wire (six rods) was made tight with the utmost ease.

The cost of this fence was somewhat augmented by the high price of the wire, dressing, and painting the materials, &c. For all farming purposes it would not exceed the following estimate, per rod, calculating the cost of the wire at New York prices, adding on charges &c. For the first rod it would require two long and one short posts, but afterwards only one of each—upon which this estimate will be based. The posts prepared as for board fence above:

For 1 long post, including setting and carting,..... 8 cts.

For 1 short post including set-

ting and carting,..... 3 cts.
For 25 feet boards,..... 25 cts.
For 3 feet palings,..... 3 cts.
For 4 strands, say number 10
wire, equal to 3 lbs., at 6 cents,.... 18 cts.
For labor, and oil for wire,.... 4 cts.

61

To sustain this fence fifty years, might require two sets of

Long posts at 8 cents,.... 16
Two short posts at 3 cts., 6
Re-planking once,..... 25
Labor, 2 49—1 10

This fence may be cheapened somewhat by using number 11 wire, which is thought to be entirely sufficient for top strands. The weight in length and cost of the different numbers is as follows:

No. 9 measures 17 feet to the pound, worth in New York,..... 6½ cts.

No. 10 measures 22 feet to the pound, worth in New York,.... 6 cts.

No. 11 measures 27 feet to the pound, worth in New York,..... 5½ cts.

By these estimates, if we have committed no error, the wire fence is decidedly the most economical, as the wire, of the durability of which we have said nothing, will last for centuries, if kept painted or oiled. The cost of repairing the post and board fence would diminish somewhat as it advanced in age, from the increased wear of the boards, if good heart, beyond our estimate. Whilst the cost of the rail fence would increase as timber grew scarce and high.

These fences also occupy less land than the others, and do not shade or extract any thing from the soil—require no cultivation to keep them in health, as the hedge—will cross marshes, branches and hill-sides, of the worst kind, and will not blow down or float off by freshets.—They should be permanently situated, however, to avoid the heavy expense to be incurred in moving.

The first step towards retrenchment in fencing is, to throw our patches into fields. One or two fields of fifty acres are entirely sufficient for a farm of five hundred acres in cultivation; the balance from seventy-five to one hundred and fifty. Where stock are not permitted to have access to fields, one enclosure would suffice.

RECAPITULATION.

Cost of constructing rail fence per rod, 28 cents; add repairs for 50 years, 93, .. \$ 1 21
Cost of constructing live hedge per rod, 50 cents; add repairs for 50 yrs. \$5, .. 5 50
Cost of constructing posts and boards with ditch, 76 cents; add repairs for 50 years, \$4 76..... 5 52
Cost of constructing posts and boards alone, 62, add repairs for 50 yrs., 73, .. 1 35
Cost of constructing wire fence 61, cents; add repairs for 50 years, 49, 1 10
—Soil of the South.

Rice Culture.

Matanza Plantation on Pee Dee, near }
Georgetown S. C., Jan 6., 1851. }

SIR:—My time has been so much otherwise engrossed since the harvest, that it has not been in my power to communicate with you earlier, and now, if indeed it be not too late for your purpose, I must write briefly, and generally, in relation to the rice crop.

Our lands are improving under the grateful influence of the fallows and rotation practised by me, as that of a system, first in 1837-8, and they produce now rice of better quality than formerly. So much is this the fact, that there is a class of purchasers recognized in the Charleston market who will be content with nothing but the choicest samples, and for these they are willing to pay an extra price.

This system, extended as it is, and greatly improved, in the hands of my observant, skilful and judicious neighbors of Waccamaw and Sandy Island, by manuring with rice straw, chaff, and even flour, has been one among the chief means of producing the beautiful "long grain" rice, cultivated now by the two most successful planters in this district, and not more than two others, as far as I know, in the highest state of maturity.

Rice Straw has long been valued as an excellent manure, when listed in and rotted, for upland corn and potatoes. It has latterly been used in the same way as a dressing for rice in the fallow swamp land, on Sandy Island, and with favorable results.

Rice Chaff, too, which was formerly discharged from the mill into the "race-way," in order to get rid of it, since its analysis by Prof. Shepard, for our Agricultural Society, is now used to some extent in renovating old lands. It is distributed over the surface, some three inches deep, and ploughed in, stimulating the production of the soil, and improving the quality of the grain.

Rice Flour, notoriously of value as food for hogs, cattle, and poultry, and selling readily, when corn is scarce, at from 12 to 20 cents per bushel, has, within a very few years past, contributed its share towards improving in both quality and quantity a particular crop in Waccamaw.

The crop of last year, (1850-1,) affording, as it does, a good portion of very prime rice, where the salt water did not affect it, will prove to be some 10 per cent. short, as estimated by us. This diminution is believed to be owing, chief-

ly, to the high winds which passed over the tide lands about the middle of August last, when the greater half of the growing rice plants were still in bloom.

Rice is essentially a "swamp seed" here.

We do not cultivate any on the upland.

Every year, however, it is grown in small patches in the interior, and tended with the plough.

The best kind of rice for this purpose is, I believe, the old-fashioned "white-seed," which was the only variety cultivated in the state until late in the last century, when was introduced among tide-swamp planters the "gold seed rice," which is now universally approved. The "bearded rice," a variety of white rice with a very long awn, was imported some years ago for this very purpose, (upland planting,) but, I believe, it is now nowhere seen, but eradicated.

The "long grain" seed alluded to above, some account of which is given in the proceedings of the State Agricultural Society of South Carolina, is the choicest variety now cultivated in this region. Like the ordinary seed, it requires particular care and attention throughout the process of culture, to have it produced of the prime quality. But, when thus produced, if it be carefully milled and skillfully prepared, the long grain rice will command in the winter market? from 50 cents to \$1 per 100 lbs. more than the very best qualities of the ordinary small grain.

For example, during the month of December just passed, the market in Charleston for small grain has ranged from \$3 and \$3.25 for prime, to \$3.37½ and \$3.50 per 100 lbs. for choice. Whereas the market for long grain has been influenced by fancy. Prices have been obtained for this kind, of \$4.25 per 100 lbs. \$4.50 also, and even \$5 for a small fancy lot.

These prices are never reported; but, having been informed that they were actually paid, I feel bound to mention the fact, when answering your inquiries as to improvements of the grain.

A specimen of this grain, with the entire plant, including the root, has been prepared, and will be sent to the Great Fair in London.

I have the honor to be, very respectfully,
R. F. W. ALLSTON.
—From the Patent Office Report—1851.

Hedge fences operate in two ways—if good they are a defense, if bad, an offense.

From the Genesee Farmer.

Smut in Wheat, and the Cause of It.
NUMBER III.

[Concluded from p. 41.]

From all the investigations I have been able to make, in relation to the manner in which the smut is produced by the operations of the insect, it is this: It perforates the *glume* (*chaff case*) of the grain, and deposits its "nit," or "egg."—On the outside of chaff case the puncture closes up, (as do, generally, the lips of a punctured wound in flesh;) but in the inside the wound or puncture is kept open by the oozing of the undigested sap of the plant, which runs into the unfilled cavity of the glume and fills it with *smut*, which is nothing more than the *crude* or *unprepared* sap of the plant thus *prematurely* let in where good flour would have been formed if the sap had been left undisturbed, to pursue its ordinary course of preparation and circulation through the *natural channels* or *sap vessels*. And when *one part only* of the grain is smutted, and the other part is *good flour*, it is, as suggested in my third article, because the perforation was made at so late a period that a *portion* of the cavity (less or more) had been already filled with *properly prepared* sap (*flour*), and but a part left unoccupied, but which was filled with *undigested* sap (*smut*) immediately after the puncture was made; both operations, that of forming good flour, and the other of forming smut, no doubt going on at the same time; the latter, however probably proceeding much the most rapidly.

Having, as I confidently believe, fully established the fact that smut in wheat is caused by the *operations of an insect*, and having discovered and identified that insect, I will proceed to consider as to the best means to be used as *preventive remedies*. And here I will confess that I have not any great degree of confidence that after the insect has been for several years an inhabitant of a farm, there is, or can be found, any certain and immediate preventive remedy for the evil, by the destruction of the insect, I have practised several modes of preparing the seed wheat—at one time washing it with water; at another soaking it in very strong lime water for twelve hours or more; In a third instance, wetting the wheat and mixing quick lime with it. Neither of these modes *entirely* prevented smut in the produce. The smut insect had become an established inhabitant of my farm, and I found it almost impossible to turn it out of the possession.

At length, however, I tried another

plan. The heavy chaff and "tailings" of the cleanings of my wheat, containing the unbroken smut grains (with, of course, the nits, or eggs of the insect in them), I carefully carried from the barn and destroyed them so that none of the smut grains went into the manure. Particular care, also, was taken to sow no seed which had a grain of smut in it. This course was pursued for several successive years, and, after some twenty years of observations, experiments, and exertions to free my wheat from smut, I succeeded in raising good and clean wheat generally, but not always—occasionally I have found my old enemy smutting my wheat again. It probably strayed over into my fields from some neighboring farm; for, since the wheat in this vicinity was first discovered to have become smutty, the evil has occurred, I believe, in some locality or other, every year, in a greater or less degree. Notwithstanding all my care and exertion to free my wheat from smut, I am not at all sure but that nature had as much to do with my success as I had myself. I believe it is generally understood that some seasons are not as favorable to the production of insects as others. Cold and wet weather no doubt destroys many of the young insects after they are warmed into life. Severe winter frosts may also do the work by freezing and adding the eggs. It is also asserted (and I believe truly), that parasitical insects deposit their nits in other insects, which being hatched out, prey upon and destroy those that have thus served them for nests and food. Some one, or perhaps all of these causes combined, may have contributed to produce the desired result. Be this as it may, I am perfectly satisfied that the course I pursued was the best and only one at all likely to be successful. If the smut grains are thrown into the barn-yard, and thence carried out upon the farm in the manure, I do not think it possible to free a farm from the smut insect. The insect appears to be brought to maturity at the time the wheat is usually earing, or "heading" out, and the deposit of the nit or egg, is commenced immediately thereafter.—Early sown wheat generally fares the best; probably because of its "heading" out before the insect is ready to commence its operations. But if sown very early, for the purpose of having its ear or "head" out before the maturity of the smut insect, it is frequently attacked in the autumn by the "Hessian fly;" and thus, by attempting to escape one evil,

we run into another oftentimes much worse; for the "Hessian fly" is generally far more destructive than the smut insect—the former frequently destroys the whole crop, the latter never destroys more than a minor portion of it. At the same time, however, if the grain is cut before it becomes "dead" ripe, it is very much injured by the grains becoming blackened by the dust of the smut grains as well as by having the unbroken smut grains mixed with it. Very late sown grain is very liable to be smutted if the insect is in the neighborhood of it. Wheat should, therefore, be sown neither very early nor very late. The best season for sowing it is, undoubtedly, between the 5th and 25th of September. Yet, as to its being smutted or not, much will depend upon the weather of the succeeding spring. If the season should be cold and "late," it would probably retard the growth of even the early sown grain, and bring its latest growing heads within the period required by the insect for the deposit of its eggs.

J. H. H.

Turkeys.

It has always been surprising to us, that so little should be said in favor of raising turkeys. The turkey is the prince of birds for the table or the market, yet it don't seem to be praised by the raisers of poultry as it should be. This thing evidently goes by fashion, and we really wish those who set the fashion in such matters would bring about the fashion of raising turkeys. They cost less in food and care, according to their size, and bring a greater price than any other fowl; yet our farmers neglect breeding them, and pay all their extra attention to the breeding of lean, lank, slooney fowls from China, that will consume twice their worth in a season, don't come to maturity till a year and a half old, and when placed upon the table, are neither good chicken or poor turkey, and from the stringy flesh of which, one turns away without any sort of satisfaction.

But says one, they are destructive! and we would ask if a China fowl is not destructive? Setting aside the fact of their voracious appetites,—bolting corn at a week old; just let them loose in your garden or corn-field and you will be satisfied of their destructiveness. They will destroy everything that comes in their way—to the onions in your onion-bed!—And that a turkey will not do. Turkeys ramble, it is true, but it is questionable whether in their very rambles, they are

not performing a valuable service to the farmer. They are in pursuit of insects, and a farmer who has a flock of turkeys is very little troubled with grass-hoppers, crickets, and such vermin.

In raising turkeys we would recommend a cross of the wild and domestic varieties. Say, put a wild gobbler, or one as near the wild state as you can get, with a domestic hen turkey, and the produce will be a good cross. The young turkeys will have a disposition to ramble, but the old hen's domestic education will keep them in check. On the contrary, if the hen turkey be wild, she will lead her progeny in every direction but the one towards home. Then our advice is, to raise more turkeys and less chickens, particularly of the lank, gawky breeds from the celestial Empire, whose only good quality, is that they are always blessed with a good appetite! Turkeys are easily raised, readily fattened, quickly sold, bring a good price always, and as a friend at our elbow says of a hand of tobacco, there is "some chaw to them!"—Valley Farmer.

Manures---No. 10.

Their Uses, History, Modes of Preparation, Comparative Value, Rationale of their Causes of Action, Etc. Etc.

BY PROF. J. J. MAPES.

Night Soil.—This valuable fertilizer has been used but a few years in this country, and notwithstanding the excrement of man has been long known to contain more of the constituents of plants than any other manure, still from its offensive odor, difficulties of handling, transportation, &c., but few farmers have availed of its use. Near our large cities many companies have been formed for the conversion of night soil into *poudrette* by admixture with *swamp mud*, meadow muck, &c., &c., and in this shape it is sold to farmers at enormous prices.—Some farmers, however, have had the good sense to manufacture their own *poudrette*, and thus save the cartage of a large bulk of useless material with which these self-styled patented articles are mixed. By having properly constructed carts, night soil can be carried without material inconvenience, and with little or no escape of its offensive odors.

Human feces is the most powerful of the organic manures, and as the food of man includes all the elements of vegetable life, these elements are not only supplied to plants by its use as a fertilizer, but they exist in the proper state to be readily

taken up, while their relative proportions to each other is such, as to meet the requirements of vegetable growth. This fact has given rise to the supposition that this manure was not lasting: which is only true so far as it enables the operator to realize the crops of three years in one, all the ingredients being ready without loss of time or of interest on their cost to be immediately returnable in valuable product. Many farmers make sad mistakes in selecting such manures only as are lasting, and not intermixing them with other ingredients to render them more rapidly active. Thus bone dust, if used in dry sandy soils, will last many years, giving off its constituents slowly; but if this bone dust be first rendered more readily decomposable by proper treatment with sulphuric acid, one fifth of the quantity will produce better results the first year, thus saving a large outlay, and giving rapid returns for the amount of capital invested.

Similar truths apply to the use of night soil, urine, &c., &c., if properly prepared, so as to produce immediate results, it may be principally availed of in one year, and this is not the least of its good properties, for unless its ingredients are really reproduced in vegetable form, those unappropriated, like the constituents of any other manure, will remain in the soil for future requirements. We have tested this fact fairly this year, by raising twenty-four thousand heads of late bergin cabbages on two acres, no other manure would have enabled the soil to have produced any such number, without a large proportion of them being small and refusing to head well; the cabbages we have thus grown are of extraordinary size, and we are now selling them at the highest market price. Paying one dollar and fifty cents per load for the night soil at our farm, and adding the whole expense of disinfecting, &c., before use, has not cost as much as would have been necessarily expended to have raised half the number of cabbages on the same area by the use of stable manure.

Our mode of preparing the night soil is as follows:—

Having prepared a large quantity of well decomposed swamp muck, by the salt and lime mixture already described, a quantity of this muck is placed on the ground in a strip eight feet wide and six inches thick—the night soil cart is driven on this strip, crossing it, until the rear of the cart is in the centre of the strip; the rear gate being opened, the content

of the cart falls on the muck and is immediately covered by shovelling the muck on top, thus narrowing the strip to four feet wide, and continuing to deposit and cover the night soil until the strip for its whole length presents the appearance of a ridge three feet wide.

As soon as the night soil is covered with the muck, it ceases to give out offensive odors; the carbonaceous matters of the muck readily absorb and retain all the escaping gasses, and after the severity of the winter has passed, it is only necessary to fork over the mass, mixing it thoroughly, and in a short time it is inodorous, pulverulent, and ready for use. When muck cannot be obtained, charcoal dust will answer equally well; or if neither of these materials are at hand, make the ridge of head lands, covering the surface with plaster of paris, and after depositing the night soil, cover with a slight coating of plaster of paris, and then with twelve inches or more of earth. Toward spring turn over the mass mixing plaster of paris through it, and thus render the whole inodorous.

One half cord of poudrette thus made, is fully equal in effective value, to ten and a half times its bulk of stable manure; and when the expense of carriage, spreading, &c., is taken into calculation, it will readily be seen to be much the cheaper manure. When night soil can be had at five dollars the half cord, it is cheaper than the ordinary stable manure at \$1, all the expenses and the relative costs of handling being taken into the account.

Davy described night soil "as a very powerful manure and very liable to decompose; a part of it is always soluble in water; and in whatever state it is used, whether recent or fermented, it supplies abundance of food for plants."—*Lectures*, p. 299. "The disagreeable smell," he adds, "may be destroyed by mixing it with quick lime, it speedily dries, is easily pulverized, and, in this state, may be used in the same manner as rape cake, and delivered into the furrow with the seed."

If Sir Humphrey had to make his mixture himself as the farmers must do, he would have found that the process, although eventually effective in destroying the odor, would during this process of disinfection, have rather overdosed the operator, and with due deference we should differ as to the economy of this method, as the use of the quick lime would undoubtedly cause an immense

loss of ammonia, all of which the farmer is anxious to retain.

When privies are intended to be emptied for agricultural use, they should occasionally receive a small quantity of charcoal dust, plaster of paris or decomposed muck, and thus be rendered almost inodorous before being emptied.

Night soil may be considered as a mixture of urine and fæces. Fæces, according to the analysis of Berzelius, gives the following products:

Water.....	73.2 parts.
Vegetable and animal remains	7.0 "
Bile.....	0.9 "
Albumen.....	0.9 "
Peccular and extractive matter	2.7 "
Salts.....	1.2 "
Slimy matter, insoluble residue, &c., &c.....	14.0 "
	<hr/> 100.0

The salts detected in this analysis, equal to 1.2 parts, were carbonate of soda, muriate of soda, sulphate of soda, ammonia, phosphate of magnesia, and phosphate of lime.—*Gehlen's Journal*, vol. 6, p. 536.

Our readers must readily perceive that the constituents are all to be found among the inorganic constituents of plants; and, therefore, when soils are short of one or more of the constituents required by the plant intended to be raised, no other manure is so likely to supply all these requirements as night soil; indeed when soils are found not to be productive from absence of inorganic constituents, no other manure can be wholly depended upon to contain them. It is true that all these constituents may be supplied by the well educated farmer from other sources, but in the absence of such information, he can dispense with the services of a chemist if near enough to a large city to obtain night soil for manure.

Berzelius has also given us an analysis of human urine in 100 parts, of which he states the relative composition to be:

Urea.....	30.10
Free lactic acid, lactate of ammonia, and animal matter not separate from them.....	17.14
Uric acid.....	1.00
Mucus of the bladder.....	.32
Sulphate of potass.....	3.71
Sulphate of soda.....	3.16
Phosphate of soda.....	2.94
Phosphate of ammonia.....	1.65
Chloride of sodium.....	4.45
Muriate of ammonia.....	1.50
Phosphate of magnesia and lime..	1.00
Silicious earth.....	0.03
Water.....	933.00
	<hr/> 1000.00

Liobig, in his remarks on urine as a

fertilizer, taking the analysis of Berzelius as premises, states: "If we subtract from the above the urea, lactate of ammonia, free lactic acid, uric acid, the phosphate and muriate of ammonia, one per cent. of solid matter remains, consisting of inorganic salts, which must possess the same action when brought upon the field, whether they are dissolved in water or in urine. Hence the powerful influence of urine must depend upon its other ingredients, namely, the urea and ammoniacal salts."

"The urea in human urine exists partly as lactate of urea, and partly in a free state.—*Henry*. Now when urine is allowed to putrify spontaneous, that is, to pass into that state in which it is used as manure, all the urea in combination with lactic acid is converted into lactate of ammonia, and that which was free into volatile carbonate of ammonia."

Our own practice has been to receive it on decomposed muck, or other organic matter containing large amounts of carbonaceous matter, as fast as evacuated by the animal, and thus during its decomposition and chemical changes, the carbon of the muck retains all the ammoniacal salts, whether carbonates or others; whereas, without muck bedding, the urine during decomposition passes off its carbonate of ammonia to the atmosphere, and even if led into close cisterns, the carbonate of ammonia will be lost either there or on the field when spread. By placing carbonaceous matter under the bedding of animals and renewing often, their fluid manures will be found to be worth twice as much, and to be able to decompose eight times as much muck as if first permitted to run to cisterns, and after cooling to be pumped upon the compost heap. Now as the decomposition of human urine, even when mixed with feces, is continually going on, and consequently constantly losing ammonia, it should be mixed with such matters before being spread upon the ground, as will retain the volatile carbonates.

Urine is naturally acid, but by its partial conversion into carbonate of ammonia, becomes alkaline, and from fixing the ammonia we double its value.

Sal ammoniac was manufactured in France even by the farmers themselves, from the urine of men and animals, and from the drainage of dung hills. Had they have been aware, however, at that time, of the true value of the nitrogen thus parted with for their own purposes,

they would not have so used it. *Boussingault* tells us that "100 parts of sal ammoniac contains 26 parts of nitrogen, and is therefore equal to the quantity of nitrogen contained in 1200 pounds of wheat, 1480 lbs. of barley, or 2755 lbs. of hay."

The carbonate of ammonia contained in human or other urine, may be rendered non-volatile in a variety of ways. If plaster of paris chloride of calcium, sulphuric or muriatic acids, and superphosphate of lime (bones treated with sulphuric acid) be mixed with urine, will completely neutralize the salts of the urine, converting its ammonia into salts which are not volatile.

If a basin of muriatic acid be suspended in a privy for a few days, so that its surface is freely in contact with the vapors rising from below, it will be found to be filled with crystals of muriate of ammonia; if, however, a sufficient quantity of carbonaceous matter (decomposed muck or charcoal) be in the mass below, no such effect will take place; and with these facts clearly understood, the farmer must be blind indeed to his own interest, if either in his privy, hog-pens, stable or manure heaps, he permits an escape of ammonia.

The close approximation of sulphate of lime (plaster of paris) with carbonate of ammonia in vapor, can never take place without a cross decomposition ensuing; giving as resulting products, the sulphate of ammonia and carbonate of lime, neither of which new compounds are volatile, but are equally valuable as manures. With such facts clearly understood, is it not wonderful that any farmer should waste the better properties of his manures, and endanger the health of themselves & animals, rather than spread a small quantity of finely ground plaster occasionally in the localities where these gases are escaping.

A vulgar prejudice has existed that vegetables raised with night soil as manure, would necessarily partake of its filthiness and partly of its odor, but such an opinion is scarcely worthy of comment; all the integrants of animals and vegetables go to re-fertilize the earth, and their ultimate constituents can only be received by plants either in solution or in the form of a gas, in either of which states, the plant will retain only such as is required for its construction, the excess being parted with as excrementitious matter by plants as well as by animals, with this difference only, that plants do

not receive large quantities of inappropriate matters as animals do, but nature's laws cause them to select only after putrefaction, (ultimate decomposition) rejecting that which men are compelled to swallow. In our breathing we take into the lungs noxious gases in large quantities, as they pervade the atmosphere, while the roots of a plant, although they may be located in a mass of filth, will not receive so much of its noxious properties during a whole person's growth, as would be inhaled by a man adjacent to this filth, in a single minute. Let those who doubt our assertion, manure a rose-bush with night soil, and they will then learn that the odor of the rose will be superior to that of one otherwise manured.

We have before stated the fact, that animal muscle when subjected to analysis, yielded large amounts of nitrogen, which was received from the food of the animal, and that all plants in common with those used as food for animals, contained nitrogen; that those manures which held the largest amount of this gas, should be preferred—that nitrogen was one of the constituents of ammonia, and hence the importance of saving ammonia by the presence of charcoal dust, plaster of paris, or decomposed muck. The following remarks by *Liebig*, shows the value of nitrogen as contained in human urine.

"With the exception of urea, uric acid contains more nitrogen than any other substance generated by the living organism; it is soluble in water, and can be thus absorbed by the roots of plants, and its nitrogen assimilated in the form of ammonia, and of the oxalate, hydrocyanate, or carbonate of ammonia."

Under the article night soil, *Liebig* observes: "In respect to the quantity of nitrogen contained in excrements, 100 parts of the urine of a healthy man are equal to 1300 parts of the fresh dung of a horse, according to the analysis of *Macaire* and *Marcet*, and to 600 parts of those of a cow. Hence it is evident that it would be of much importance to agriculture, if none of the human urine were lost."

Some of our neighbors supply the Newark factories with receptacles for urine, and by placing a small quantity of charcoal dust and ground plaster in these vessels, the volatile portions are retained; when the vessels become filled, they are moved to the farms and applied to compost heaps, containing large proportions of muck or other carbonaceous matters.

Let us now examine the properties and

constituents of such a compost heap as that named above. We know that plants require both organic and inorganic constituents, and that these matters are more readily available by plants, if thoroughly intermixed with each other; those in water, are rendered soluble by the chemical changes which must go on in such a compost heap while the carbonate of ammonia and other volatile matters, which would otherwise be lost, are retained by the finely divided carbon of the decomposed muck or peat; when such manures are applied to the soil, their constituents will be retained till *all* are used by the plants, except the carbonaceous matters; these remain and continue to perform the important office of abstracting ammonia from the atmosphere for the use of plants, thus playing the part of an economizer of nature's gifts, ever ready to re-perform its office when required to do so. Lands manured with such compost, will be rendered more permanently fertile than by the use of any other manure, and during its after culture, will only require slight additions of inorganic matters to supply those taken up by plants, the other requirements being always readily received from the atmosphere by soils highly charged with carbonaceous residuums, such as would be left by the decomposed peat or muck. No manure heap will be as thoroughly decomposed in all its parts, as one containing a portion of night soil, and this, too, without the expense of *fire-funging* so common with most composts. In our next number we shall give well attested experiments, showing the comparative value of night soil as a manure, with a full account of the practices of the Chinese and other nations who have long used this manure with decided profit.—*Working Farmer.*

For the Farmer and Planter.
Plantation Records.

"However great may be the knowledge of an agriculturist, it is impossible, without a reminder, to recollect each part of the farm operations at the precise and proper date for their performance. This is particularly true of the vegetable garden, and it is not uncommon for the most careful gardeners, who are not supplied with such a calendar, to forget some of their crops until after the planting season."

We plead guilty to the impeachment—but honestly confess that we would not have had the temerity to do it but for the

above admission by as distinguished an agriculturalist as Professor Mapes. We know several practical gentlemen who don't find it necessary to take a paper or read a calendar—because they know every thing about their business, and never forget any thing. We confess candidly that we are rather dull and find it necessary to keep a little note book, in which we jot down work to be done on rainy days—at odd times, and by slight of hand. We would be "horse de combat" often without it, and we keep Affleck's Southern Rural Almanac hanging on a nail, always convenient, that we may at an odd moment run ahead of our farm work, refresh our memory, post up the past and plan for the future. This invaluable little pamphlet should be in every farm house. It is full of good things—not puffs of quack medicines, pictures of hideously featured, diseased wretches, who have been cured by some confounded Indian vegetable elixir—compound, extract—but work to be done receipts to be relied on, and advice worth far more than all the almanacs of the day. System is the life of all business, and there is no avocation in which it tells more than agriculture. It simplifies our duties and gives efficiency and point to all our operations. Every man should keep a daily journal of farm work—a glance at it now and then, will enable him many a time to evade a Scylla or Charybdis in his voyage.

Mr. Affleck's Plantation Record and Account Book, is the completest thing of the kind we have ever seen—it comprehends every thing required, and is so simple and well arranged that you are almost obliged to go right. For \$2 62 enclosed to Thomas Affleck, Washington, Adams county, Miss., a planter can have sent to him free of postage, the Record Book and Almanac. It will take half the money to buy a common blank book. It is high time that the southern planter should introduce a more systematic management in lieu of the old slipshod way of doing—the increasing intelligence of the agricultural class will soon make it indispensable. Head work! Head work—mental as well as physical fertilizers we want, and nil desperandum.

Big Branch, March 1. BROOMSEDGE.

Louisiana Hemp.

Every body knows what the Okra (Gumbo) plant is; but few know how profitable it may be made. The following appears in the Patent office Report:

Parish of Plaquemine, Jan. 24, 1841.

John Blane, the bearer hereof, raised on my plantation (at Deer Range) some beautiful specimens of hemp from the okra plant, and raised seed enough to plant forty or fifty acres. I consider it as valuable as any other staple raised in this State; and should have continued the culture were it not that it interfered with work I was compelled to pursue in the management of my cane crop.

I am not able to say how much it would produce to the acre: but, from what I saw, I think it would yield from thirty-five hundred to five thousand pounds clean hemp per acre, and require less work than any other crop until the gathering commences, when with proper apparatus, the labor would be less than with either cotton or sugar.

Mr. Blane himself is an honest and industrious man, worthy of all praise, and I give him this testimony with pleasure.

[Signed,] MAUNSEL WHITE.

Justina, March 12, 1852.

Mr. Jean Blanc has raised on Mr. T. B. Poindexter's plantation some beautiful specimens of hemp from the okra plant, and from what little I saw, I think it will yield from two to three thousand pounds per acre. I can testify to its lasting longer in water or in the damp, than any other hemp I have ever seen.

[Signed] H. M. CHAMBLESS.

Justina, March 18, 1853.

John Blanc, the bearer, has raised on Thos. B. Poindexter's plantation twenty-four hundred and fourteen pounds of hemp from the okra plant on six acres of land, planted on the fifth of July, and was planted so tall that it did not make more than half a crop.

Mr. Blane is a very honest man: I sign this with pleasure. P. H. MILLER.

The *Orleanian*, in some judicious remarks, calls on our planters to turn their attention to this staple.

New Plan of Saving Potatoes.—Put them in barrels of any kind—so they have one head and are tight enough to hold corn in the ear—then lay the barrels, one open head against the other. Cover with dirt, or with straw and dirt on that. They will need no roof to protect them; will keep perfectly well; and are got at more easily.—*Granite Farmer.*

Effects of Guano.—Col. Wm. D. Bowie, of Prince George county, Maryland, has sold one of his farms at \$100 per acre.—The soil was originally thin. Lands in Maryland are constantly changing hands at from \$30 to \$40 per acre.—*Ibid.*

From the Patent Office Report--1851.

Wheat, Potatoes, &c.

TISHAMINGO COUNTY, MISSISSIPPI, }
December 21, 1850.

Sir:—The Agricultural circular of the 26th of August was handed me a few days since for perusal, and I have concluded to write a few lines in answer to some of the inquiries propounded therein—not that I expect to add anything of particular interest to the common stock, but, by writing something, I may probably receive the Patent Office Report, which will enable me to profit by the experience of more skillful planters embodied therein.

Wheat.—Varieties in use here are generally Orleans and red spring; I prefer the former; it is usually sown on corn or cotton land, after the crop is gathered; three quarters to one bushel of seed per acre, put in with small ploughs, running two or three inches deep, and seldom harrowed or brushed—consequently the ground is very uneven, and a small crop the result, say from 5 to 7 bushels per acre. There is no preparation of seed, except being soaked in a strong solution of blue vitriol, for from 12 to 24 hours previous to sowing, to prevent smut, which is effectually done by this process. It is generally sown from the 20th October until the 15th November, and harvested between the 25th May and 5th of June: it is sown thus late to prevent the ravages of the Hessian fly; but I believe that wheat might be put in in August or September, and would furnish a good winter pasture for sheep or calves; by being grazed close in the winter, the fly is destroyed and the wheat not materially injured.* I have tried this several times on a small scale with very good success. For several years, I have sown wheat on oat stubble, in the following manner:—Break the ground with a heavy two-horse plow, running from 4 to 6 inches deep; (if this was followed by a sub-soil plow the yield would be greatly increased;) I then run a heavy iron-toothed harrow lengthwise the furrow; I then put about one bushel of seed per acre, plow with a small plow the same way, and finish by harrowing or rolling; a light top-dressing of rotten straw, long manure, or even leaves, will increase the yield considerably. Without this dressing I have usually made from 10 to 15 bushels per acre; the average price here per bushel the present year is \$1. To

*We have no doubt of this, from what we have witnessed in Cass co., Ga. on fresh strong land.—Eds. F. & P.

prevent weevils, it is only necessary to get the wheat out as early as possible, have it well sun dried and suffered to cool thoroughly, then put it in tight caske or boxes, in a cool place, (a good cellar is the best place,) and no weevil will appear in 12 months.

After wheat, I plant corn, by first breaking and pulverizing the ground well; lay off rows $4\frac{1}{2}$ feet apart, with a scooter or bull-tongue plow, throw two furrows to it with a turn plow, check off same distance, drop from 4 to 6 grains of large white corn to the hill, cover with a hoe, and then all the manure I can rake and scrape is put on the hill, at the rate of shovel-full to to each hill. The corn when half leg high is thinned to two stalks. I plough twice or three times, and finish the cultivation with a light harrow or cultivator. The second plowing I plant the red-ripper or tory pea, in the step, from 10 to 20 in a place: they are a fine bearer and a good renovator.—I gather from 39 to 50 bushels of corn per acre, (but this is a poor common yield.) After the corn is gathered, I turn in my hogs, and very little corn will make them good pork. This crop is followed by oats, with a yield of from 15 to 25 bushels per acre, worth from 33 to 40 cents per bushel.† I have followed this system of tillage for 10 years, and am confident my land has improved in fertility.—One hundred pounds of corn fed dry to hogs will produce 20 to 25 pounds of pork; if boiled or soaked until soft, from 30 to 35 pounds; the manure from any given quantity of corn fed to hogs, if carefully saved and skillfully applied to corn when planted, will increase the product from 30 to 40 per cent. of the amount thus fed away.

Sweet Potatoe are a valuable crop for the table, for milch cows, or hogs, fed either boiled or raw. The white or red yam are the kind generally cultivated here. These are generally bedded out, say from the 15th of March to the 1st of April, to secure a good and early crop of slips or plants. Dig a ditch 3 feet wide 18 inches deep, and, for every bushel of seed, 3 feet long; fill this ditch to within 4 or 5 inches of the top, with fresh stable manure; then throw on sufficient earth to raise it above the level of the surrounding ground, so as to prevent excess of wa-

†This course we consider too exhausting. A year's rest should intervene between the oat crop and wheat fallow. This we have proven to be a good rotation. A pea crop sown broadcast early and fed off to hogs previous to wheat sowing would we think greatly improve the system.—Eds. F. & P.

ter standing on the bed; on this, lay the potatoes so as not to touch each other; then cover with earth to the depth of 2 or 3 inches, as weeds and grass will first make their appearance, this depth will allow you to scrape off with a hoe or rake the first crop of weeds, leaving the covering $1\frac{1}{2}$ to 2 inches thick; the ground intended to be planted should be well broken and pulverized; when the slips begin to come up, lay off rows 3 feet wide, and bed up with a good turn plow, check the same distance the other way, and make hills, leaving the top flat, so as to catch the rain; when the slips are 3 or 4 inches high they will do to plant.—Should there not come a season to plant when the bed is well covered with plants, draw them in the evening, dip the roots in water, plant 1 in each hill, leaving 2 or 3 leaves above ground, press the dirt close around them, pour on from $\frac{1}{4}$ to $\frac{1}{2}$ pint of water to each plant, repeat next evening and they will generally live.—Four bushels of seed bedded out will be sufficient to plant one acre; in good time after culture. As soon as the vines begin to run, scrape down with hoes; weed when they have reached 18 inches or 2 feet in length, (some will be longer of course,) cut off the vines to within 6 or 8 inches of the root, plow both ways with a scooter plow, running pretty deep into the hills, so as to loosen them up; hill up with a hoe, being careful to cover no part of the running vine. By cutting off the vines as above directed, new vines will start out and cover the ground much sooner than they would otherwise do; and should you be scarce of slips, the vines thus cut off answer every purpose, planted in the same way; the yield is generally from 200 to 300 bushels per acre, and worth from 30 to 50 cents per bushel. On suitable land, no manure is necessary: strong stable or barn-yard manure injures both the smoothness and flavor of the potato: rotten straw or leaves, are best applied broadcast.—Those intended for table use may be kept in a cellar or house made for the purpose, or they may be kept in the following manner:—Raise a bank a little above the level of the surrounding ground, cover with dry straw, pile up the potatoes as high as you can lift dirt with a spade, cover with dry straw, then with earth to the depth of 10 or 12 inches, put a good coat of vines over this and they are safe. I have have not failed in upwards of 20 years to keep them thro' the winter in this way.

I am, very respectfully,

Your most obedient servant,

JAMES WORD.

THOS. EWEANKS, Esq.,

Commissioner of Patents.

For the Farmer and Planter.

What may be done—Potato Culture.

MESSRS. EDITORS:—As we have quite a wet day, I will take it as an opportunity of writing a few lines to you, to let you know that I have not forgotten my promise. I am more encouraged than I expected in my feeble attempt to circulate the *Farmer and Planter*. There has been a great deal of sickness in this vicinity, and much of my time has been taken up in visiting the sick—I have, therefore, not been as active in circulating the *Farmer and Planter*, as I otherwise would have been. I have got rid of the 12 copies received at this office, gave away my own, and wish I had ten or twelve copies more of the January number. It seems to take like hot cakes. I think if you will send 25 copies here it will not be very long before I send you \$20 for them. I enclose you the names of our present list of subscribers at this office.

I am very much pleased with the January number. The address of Dr. Barratt is worth five times the subscription price, itself.

Messrs. Editors, as I feel that I am well paid in every piece I read pertaining to agriculture, whether or not it agrees with my notions, views, or plans of farming, I will in return give a statement of the management of a small potato crop made last year. My intention was, before planting time, to try "Red Oak's" plan, as given in the April or May number of your paper for '51. But when I opened my slips*, I found that they were rotten with the exception of a few bushels. I therefore instead of planting ten acres, I laid off exactly one and a half—the half acre having been well cow-pened the year previous, and turnips raised on it. The acre added was poor clay land, thin soil, which had been planted in cotton. After breaking it well with a common turning plow, I laid it off in 4 feet rows and plowed up well again in beds, then crossed it off 4 feet the other way, for the purpose of making hills, which was done the last week in April. I then took cotton seed and dropt one handful where the centre of each hill would be, in the poor part, drew up the hills, and planted two good sound pieces of slip in each hill from one to two inches long. Early in May they were all up. I wet the slips, or dropped them out of water. I don't believe there was a mole in the piece of ground as there was not a *missing hill*. When the grass got up it was shaved off the hill with hoes, the day being hot and dry. After standing a few days till thoroughly dead, a plow, called by some the buzzard, by others the eagle, sweep, or seraper, was run each way between the hills one time, which seraped up the

* Our correspondent uses the term *slip* for seed.

young grass and May-pops in the alley and divided the dirt equally for drawing up on the hills, which was done at a suitable time, when the dirt was not wet enough to stick together in clods, or dry enough to slide off. The vines at that time being from six to eighteen inches long. Some time in August, after taking fodder, the weeds, grass and May-pops, were carefully hoed and pulled out and laid on the vines (which completely covered the ground) to prevent their again taking root. Some time in September the family, both white and black, began to indulge the palate on potatoes, which continued to be done freely till the first week in November, at which time they were dug and housed. I don't pretend to say any thing about the number of bushels, but we housed more than we ever had done from four or five acres when we thought we had made a good crop, and the family 20 in number, have partaken of them freely since they were housed.—They were used as change food for 45 head of hogs, and if they continue sound as heretofore, will last till June. The patch, after digging, gave between 40 and 50 head of hogs a good start. I don't pretend to put this forth as a good plan for making potatoes, but it happened to work well that time, and a neighbor of mine has made two very fine crops by applying cotton seed in the same way, planting in beds on very poor land.—Neither do I pretend to say that my potatoes were, any of them, as large as those presented to my friends, the Editors of the "Marion Star," the "Peedee Times," and "Darlington Flag," nor the Louisiana potatoes that weighed fifteen or eighteen pounds, notwithstanding, there were many that would have baffled the efforts of a fair young lady to hold with one hand the small end and bite off the large.

The potatoes were of the pure, thin Spanish kind.

A SUBSCRIBER.

Williamsburg Dist., Feb., '53

Queries.

LEWISVILLE, CHESTER DIST., S. C. }
March 10th 1853.

MESSRS. EDITORS:—The Feb. number of the "Farmer and Planter" has come to hand (the Jan. No. not rec'd.), and you will find enclosed my subscription, one dollar. Although my planting interest is on a small scale, yet I feel a deep interest in the subject, and wish to avail myself of every help within my reach. I believe your paper is eminently calculated to promote the agricultural interests of the South, and should therefore receive the active and material aid, of an intelligent and discriminating public. As well might the chemist lock himself up in his laboratory, and, by dint of slow experiment, attempt to analyze the nature and properties

of chemical agents, doggedly rejecting the experience, of those who have preceded him, as that the planter should reject the assistance and experience, of those who precede or are contemporaneous with him, whose opportunities, perhaps, have been much better than his own.

I expect to make some experiments with guano, on both corn and cotton, this year, and would be exceedingly gratified to ascertain the most approved mode of application, quantity, &c., &c. Could you, in your next number, give me the desired information? I wish to make an experiment on an acre of rich bottom, having been in cultivation seven years. Yours, &c., L. McD.

REMARKS:—Our friend will accept our thanks, and excuse us for publishing his letter. On the subject of the application of guano, we have already published some articles based on the experiments of ourselves and others, which we trust have been received. Will others of our subscribers, who are posted up, respond to the enquires of our correspondent? We have ordered a ton of Kettlewell's Salts and Guano, to be mixed in equal quantities, which, rail roads and intolerable waggon roads permitting, we hope to receive in time for our next crop—and, if so, our friends shall hear more from us on this subject of growing interest.—Eds. F. & P.

Agricultural Schools.

In Virginia an association has been formed to establish, in Loudon county, an agricultural institute and experimental farm, and suitable buildings are now being erected.

The trustees of the university of North Carolina, at a recent meeting, resolved to establish in connection with the university, "a school for the application of Science to the Arts," and for that purpose made two new professorships, one of civil engineering, and one of agricultural chemistry, to be opened on the first of January, 1854. This is a very important movement for the South, and will present many additional inducements for parents to send their sons to North Carolina to be educated.

It has been a question whether agricultural schools should have individuality, or be made appendages to colleges, and the weight of argument, we think, is in favor of the former.

Prof. Johnson, whose opinions on this subject, are entitled to consideration, while he admits that agricultural departments may, with propriety, be attached to colleges and universities, says:

"At the same time, any encouragement which the state may give to this kind of instruction should be given to the one

school by which all other schools are regulated. There is this difficulty," he continues, "in regard to attaching agricultural departments to existing colleges, that if this department is under mere scientific men, the peculiar wants of the Farmer's sons will not be promptly looked to. In the suggestions I made to the legislature of New Brunswick, while I recommended the establishment of an agricultural school at Fredericton, where there is a college, I recommended that it should not be connected with the college, because the Professors not being practical men, are not calculated to give instruction in relation to practical agriculture.

"It is necessary that such school should be in charge of men who understand agriculture, and the wants and wishes of the agriculturists, and who know what should be done to improve both. However profoundly learned a professor may be, if he is not acquainted with practical agriculture, he will be likely to take up crude notions and inculcate them, and thus do harm rather than good."

There is good sense in this, and we confess we should prefer a separate organization for agricultural instruction, if the state could afford the means. But as this cannot be hoped for at present let the other alternative be adopted—let professorships, like those recommended by the North Carolina University be established, and competent men be appointed to them.

This would go farther to make the new institution popular, than any other plan that we know of. It would give an immediate impetus. Hundreds of planters, who see the professions overlooked, and have land for their sons, would send them there to learn the principles of science applicable to agriculture, and those that have not land would be sent there to become practical overseers—a class constantly in demand and of great value to the community.—*Southern Organ*.

Drought and Deep Tillage---Worth Considered Seriously.

The depth to which the roots of wheat, corn, clover, etc., penetrate the earth under favorable circumstances, is much greater than is generally supposed. We have seen roots of wheat, under ordinary cultivation, that were upwards of nine feet long; and it is supposed that clover roots descend lower than wheat, though on what evidence we know not. The value of deep plowing and thorough pul-

verization of the soil, is now beginning to be more generally seen and believed in.

There are some soils on which deep plowing would, for the first few years after the operation, prove injurious; yet in the end under the meliorating effect of the atmosphere, the advantage of such plowing and working would be most decided. Sub-soil plowing, of merely loosening and breaking the sub-soil without bringing it to the surface or mixing it with the surface soil, cannot prove injurious on any soil, though it may the first and second year cause it to throw up a most unusual quantity of weeds, instances of which we have ourselves experienced.

We do not think it advisable or necessary to plow deep yearly; once in four or five years being all that is required. Especially is this true where manure is applied pretty freely, and crops are grown which require most manure during the early stages of their growth.

It is rather a difficult matter to get some farmers to believe that in a very dry summer, land that is well under-drained and sub-soiled, so that all water shall drain off quickly, if really wetter, or is capable of supplying more water to the growing plants, than a similar soil undrained or shallow plowed. It is nevertheless a fact; and more and more are convinced of it each year, as they see the good effects produced. And as we believe that all which is necessary to cause a farmer to change his mode of culture, is to convince him that he is in error, and to show him a better way for him to adopt, we think there can be no doubt that the next twenty years will witness a great change in our system of agriculture, and under-draining and deep plowing will be the foundation of the much needed improvement.

We have been led to these remarks by reading an article in the *Rural New Yorker*, of September 9, from the pen of Linus Cone, Esq., of Troy, Oakland county, Michigan, in which, after saying that the crops have been most seriously injured by the drought this season, he gives the following most important and interesting statement:

"As an instance to show what deep cultivation will do in the time of severe drought, I will mention a field of about six and a half acres, mostly high, dry, undulating, clayey land, which has been in grain most of the time since it was cleared—over twenty years ago. Five years

since it was manured with about thirty loads of coarse barn-yard manure to the acre, and planted in corn for two seasons, then barley and oats for one season, then wheat, and seeded with eight or ten bushels of clover chaff to the acre.—For the barley and wheat crops it was sub-soiled and made fine and mellow to the depth of twenty inches. This season it was in meadow, and a heavier growth of grass I never saw; thirty-three loads of hay were taken from it, and since it was cut the pasture has been fresh and good. Here was probably over three tons of hay per acre, while on the other land of this county, of similar soil, but which had been subjected to shallow tillings, the grass was light—in many cases hardly worth cutting.

"I might mention other instances to show the beneficial effect that deep cultivation has upon growing crops, but it is not necessary—it would not probably do any good even if such a statement should be made to every farmer in our land. It is so much easier to grumble about the weather than it is to put in the plow, that nearly all prefer the former course."

The fall is the most convenient time for sub-soil plowing and under-draining.—*Genesee Farmer*.

We are glad to find the above article seconding our often repeated views on deep and sub-soil plowing, under-draining, &c.; and we hope the writer will ere long be willing to plow deeply each year.

The fear expressed of injuring the soil by deep tillage, is groundless, if the depth of plowing be increased but one inch at each plowing; such a gradual increase of depth will subject the newly elevated portions to the combined influences of sun and air, so as to improve their texture and render them surface-soil. By such practice for a few years, any soil may be turned into a deep one.

That deeply disintegrated soils are not seriously affected by drought can be no longer disputed. The experiments of Mr. James Campbell, of Weston, and thousands of others, clearly show that corn will not curl during drought in well sub-soiled lands.

Sub-soiled meadows do not run out.—During the droughts of summer, when the land seems parched, it is not because the water is put out of existence, but because it is resident in the atmosphere instead of in the soil; and in deeply disintegrated soils the atmosphere will de-

posit its moisture on the surfaces of cold particles, just as it will on the surface of a cold pitcher when exposed to its influences.—*Working Farmer.*

Water-Proof Paint.

A writer in a late number of the *Scientific American*, who gives the initials of S. C., and dates at Lebanon, in this state, supplies us with the following information with regard to paints, that may be useful to the readers of our paper:

Cheap and useful paint for roofs, walls, fences, outside plastering, etc., may be made by using tar—common tar or coal tar, made thin with spirits of turpentine. Let this be used instead of linseed oil, and to form the body, add fine earthy matter such as dried clay or soft burnt bricks ground fine in a plaster mill.

The soft shaly slates of different colors, like the "Ohio Paint," also answers a good purpose when finely pulverized, to form the body of the paint. For the coarsest kind of work, dry fine sandy loam may be used as a body. Any of these earthy bodies when made sufficiently fine can be used to good purpose in painting either with the tar mixture or oil. Plastered walls on the outside of buildings may be thus rendered water-proof and lasting by using the above cheap paints, and after one or two coats it will take but a small quantity of oil paint with lead, to make a fine finish with a single coat of any desired color.—Whenever a surface thus rendered impervious by this cheap means, is painted over with oil and lead, a single coat upon the surface, instead of being absorbed, will dry in a thin tough film on the surface, and be more effective than three coats of the same paint upon an unprepared surface, which like that of common wood-work, absorbs the oil from the lead.—*Ohio Farmer.*

Good Paint for Brick Dwellings.

A writer in the *New York Tribune*, remarking on the Milwaukee brick as a handsome building material, says that it is too expensive, and that the same effect can be produced by a cheap kind of paint, more suitable, and far cheaper for coloring brick than oil paint, which is very expensive. He says, oil paint is expensive, and is not, when on, just the thing for brick; but a paint may be made for brick without any oil, much better than with. The brick dwelling in which I reside, has a coat of paint upon it which has been there several years and is

now quite as fresh as when first painted, and likely to remain so a great many years more. The basis of the paint is common lime mixed with water. Sulphate of zinc is the fixing ingredient.—The requisite shade may be made by adding colors used by house painters. I have now in my mind buildings that have been standing quite a long time without the renewal of paint. The composition costs but little more than common white-wash. The same may be varied by adding Venetian red or yellow ochre, or burnt sienna, (to suit the taste,) and the sulphate of zinc. This paint was highly recommended by the late A. J. Downing—good authority in such matters. It forms a cement with brick which nothing but the severest friction will remove. I have seen quite a number of buildings with Milwaukee brick fronts; but have noticed a dull, rusty look about the edges of the brick that materially destroys the good effect of the cream color. A much clearer and richer cream color may be attained by using the common red brick with this composition, with yellow ochre for the coloring matter. For country houses, a somewhat more lively and warmer color may be obtained by the addition of Venetian red to the ochre in small portions.—*Ibid*

NOTE.—These article on paints are recommended to the reader as worthy of consideration. There is a sad lack of attention to the outside ornamenting of many of our dwellings and public buildings; careful attention to which would exert a fine moral effect.—*Ed. Western Horticultural Review.*

Rancid Butter.

The *Echo du Monde Savant* says: A farmer in the vicinity of Brussels, having succeeded in removing the bad smell and taste of some butter, by mixing it with chloride of lime, he was encouraged by this experiment, and he has restored to butter, the taste and odor of which were insupportable, all the sweetness of fresh butter. This operation is extremely simple and practicable by all. It consists in simply working the butter in a sufficient quantity of water, in which from 25 to 30 drops of chloride of lime have been added to every two pounds of butter. After having mixed it until all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn and worked again in clear water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having varied the experiment, it was found that

from 25 to 30 drops to every two pounds of butter, was sufficient.

Another method of restoring sweetness and flavor to rancid butter, said to be very effectual by those who have tried it, is to put it into a churn with new milk and work it till all the old rancidity is removed, after which it is to be taken from the churn, worked and salted afresh.

Tar for Sheep.

It is stated by a recent writer, that tar is a great preventive of disease in sheep. He feeds four or five gallons of to each 100 sheep during the year, and occasionally applies a little tar to the nose of each sheep, during the warm season, to keep the gad-fly from troubling the flock. His plan of feeding is to mix the tar with salt, by scattering the salt in a narrow trough and pouring the tar upon it, when the sheep eat it readily.

"When we hear," says the *Boston Post*, "men and women speak lightly of the industrious part of the community, we feel just like tracing back their genealogy. We have done so in several instances, and you would be surprised at what we learned. The most aristocratic man of our acquaintance is the grandson of a fiddler; and the proudest woman the daughter of a washer woman." And we have some ladies among us who make great pretensions and assume all the "cod-fish aristocracy" airs—turn up their delicate olfactory organs at a "mechanic," who was "fok up" in a "cabin" and went to school barefooted.

A Valuable Remedy.—The *New Haven (Ct.) Palladium* says:

We are able to record another case of the complete cure of erysipelas by the simple application of the raw cranberries pounded fine.—The patient was a young lady, one side of whose face had become so much swollen and inflamed that the eye had become closed, and the pain excessive. A poultice of cranberries was applied, and after several changes the pain ceased, the inflammation subsided, and in the course of a couple of days every vestige of the disease had disappeared. The case occurred in the family of one of the editors of the *Palladium*, and we can therefore vouch for its truth.

Reducing Bones for Manure.—The *American Farmer* gives the following method of reducing crushed bones without sulphuric acid. Mix two bushels of ashes and one of salt, with each bushel of crushed bones; moisten the bones, and leave the whole in pile four or five weeks before using the mixture, shovelling it over two or three times during that period. This is certainly a very economical method of dissolving bones.

[*Aflecks' Plantation & Garden Calendar.*]

Blessed is the woman whose husband has a wooden leg, as she will have but one stock to knit.

Fruit Trees.

To Repair Injuries of the Bark—Not unfrequently are fruit trees, especially those which are small, severely injured during the winter, by being gnawed by mice or broken by cattle, or a heavy load of snow; because no cheap easy method of treating such trees has been known to farmers, many have suffered severe loss, besides the disappointment consequent upon the destruction of favorite trees, whether designed for ornament or for the production of fruit.

More than sixty years since, William Forsyth, then gardener to the King of England, published a work containing directions for curing diseases, defects, and injuries in fruit and forest trees, by means of a composition:

"Take one bushel of fresh cow dung, half a bushel of lime, rubbish from old buildings, that from the ceilings of rooms is preferable, half a bushel of wood ashes, and two quarts of fine sand. The three last articles to be sifted fine, and then mixed with the first, working them together until the mixture is very smooth and soft, like plaster."

The tree is to be prepared by carefully removing all decayed or injured portions down to the sound and fresh wood, leaving the surface smooth, rounding off the edge of the bark very smooth. After this the above plaster is to be spread very carefully and smoothly over the cut surface and somewhat beyond. The plaster should be from an eight to half an inch thick, smoothly and thinly finished off at the edges. After the plaster has been spread, it should be dusted over with a mixture of four parts of dry ashes to one part of fine sand once in twenty or thirty minutes, until the moisture is all absorbed, and there is a smooth, dry surface.

Trees that are broken down may be cut off smoothly and healed in the same manner; and large limbs of trees may be cut off with safety, if the mixture is carefully applied to the cut surfaces, so as to completely exclude the atmosphere and moisture. As the tree grows it will be necessary to press down the mixture which is raised up at the edges by the growth of the bark, and can be done best during damp or rainy weather, when the mixture is softened by the moisture.

After this method and mixture had been carefully and fully tested in the king's gardens, at Kensington, the Commissioners, who had the matter under consideration, were so well pleased with the result that the

King ordered £4,000, or about \$20,000, to Mr. Forsyth for making public his composition, and the method of using it. This method has been tried in Russia, in Canada, and in the tropics of India, and cannot fail to please those who make a trial of it.—*New England Cultivator*.

Cost and Profits of Guano.

A correspondent of the *Edinburgh Quarterly Journal of Agriculture*, in allusion to the fact, that the fixed price of guano has settled to \$45 per ton, states that it is a curious coincidence that the returns of the crops manured with it amount to just about the cost of its application. For example, three hundred weight per acre, the usual quantity, amounts to 30 shillings, (sterling,) which has been found on an average to increase the whole crop six bushels. This, at 40 shillings per quarter, is just 30 shillings, the exact expense of application.

The amount consumed in that country, in consequence of no profit being made by its use as a manure, he thinks is very moderate, when compared with the extent of farming territory, and will continue to be so until the price of guano is lessened. By reducing the duty on this article to one pound per ton, the price would immediately become so low that farmers would find its use eminently profitable, and the trade would increase so rapidly that the Peruvian revenue would be actually augmented. "The British creditors of the Peruvian nation have not allowed them to make that reduction;" the chief difficulty in the way of which, appears at present to be want of sufficient proof of the extent of the deposits—some distinguished persons having declared that they could not hold out twenty years, at the present rate of consumption; while others assert that there are no less than thirty millions tons in the beds already explored, to say nothing of others. It must be a very superficial examination that would lead wise men so far apart as this in their estimates, unless interest has led to gross misrepresentation, as there is some difference in twenty years and several centuries. Cannot some of our powerful governments afford to send a competent person to examine these beds accurately, and to furnish a true estimate of the number of cubic yards?—*Id.*

Preserving Fence Posts.

Accident in some instances has led to the discovery that lime applied to wood, preserves it from decay. The white-washing of fences is practiced, more as a substitute for paint and appearance sake, than to prevent decay. Even this superficial mode of applying lime, is of some use in preserving wood. Having full confidence in the efficacy of lime as a preservative of wood to make

fence posts less subject to rot, I have this season, for the first time, used it as follows:

I provided a number of boards, about three feet long, of various breadths, and one inch thick, with a hole in the end of each. When the hole in the ground was ready for the reception of the post, some lime was put into it; on this lime the post was placed; some of the narrow boards were selected and placed to and around the post in the usual manner; and when filled, the boards were drawn out. This is done with greater facility by putting a stick into the hole in the upper end of the board, by which it may be raised by a lever or pry, if too fast to draw out otherwise.—The boards being all removed, fill the space they occupied with quick lime; if but partially, it is better than if totally slaked, because as it slakes it will expand, and make the post stand very firm. If altogether slaked it will also swell and make the posts very secure. From three to five posts with hewn or uniform butts, will require one bushel of lime. Boards to surround the post, half an inch thick, (and perhaps this thickness of lime may be sufficient,) would not take half that quantity. The lime is all the additional expense, except the extra labor, which is very trifling, to be incurred by setting up a fence, with that part of the posts in the ground enveloped in lime. To prevent the ground from adhering to the post at the surface, and occasioning their decay, this part being the one which generally first begins to rot, lime mortar is applied, plastering round the posts with an elevation adjoining to the wood. Into this mortar, gravel was pressed to prevent the rain from washing it away. This mortar may be applied at any time convenient after the fence is made.—*Maine Cultivator*.

Chinese Mode of Making Capons.

The Chinese who are very expert in making capons, use the following method:—The wings of the fowl being folded back till they meet, the left foot of the operator is placed on them, the fowl being laid on its left side; the great toe of the right foot is placed on its legs; the feathers are then plucked off by the side—an incision, about an inch in length, commencing about an inch from the back bone and extending obliquely downward, is made with a knife, the cutting part of which is bevelled to a point, like a dissecting scalpel. This incision is carefully carried through the skin, muscles and membranes, till the intestines are laid bare, while flat blunt hooks are put into the incision, which is extended and kept open by the elasticity of a bamboo or whale-bone; the intestines are pushed aside with a pair of forceps, which are used to lay hold of the stone,

when it is by this means brought into view, while there is passed over it, through a bamboo or elder tube, a horse hair, which is drawn backwards and forwards through the tube till the the spermatic chord is cut through; the stone is then scooped out.—The other stone is removed in the same manner. No blood issues from the spermatic chords, nor does the animal appear to feel pain. The hooks are then removed, the wound is closed up, the feathers which have been plucked off are stuck upon the wound with the blood, and the wing being put down on it, the animal walks off as if nothing had happened. Young cocks, three months old, are made choice of for the operation, which must, if possible, be performed before July as it has been remarked that capons made later than this never prove fine.—*Dickson on Poultry.*

Tool Shop for Farmers.

Every farmer should have a variety of tools, such as are needed in repairing farming implements—fences, gates and pens; and for doing such work generally as will always be required on the premises, and which every person may acquire the habit of doing, although he has no mechanical trade. How often does a nail give way, and hence a board become loose! If he has nails and a hammer at hand a few minutes will be sufficient to make it secure. Whereas, if permitted to remain insecure, it may fall and be broken, so that a new one will be required to supply its place. How often will the fastenings on a gate or door demand a brief attention, to prevent destruction from going where they ought not! How often does a rake tooth or an axe handle get broken; a hoe handle become loose in its socket; an ox-bow pin get lost; a floor plank in the stalls become damaged! If he has tools and materials for making repairs he may do it himself, in half the time to be occupied in going after a mechanic to do it; besides if he does it himself, he does not have to pay another person for doing it.

To do these things, he must have hammers and hatchets, gimlets and augers, chisels and gouges, drills and screw drivers; saws and files, squares and compasses, pliers and pinchers; also, a punch, a vice, adze, drawing knife, a gauge, and perhaps twenty other articles, the cost of which is not much, not equal to what they will enable a person to save in a single year, if he uses them as he may do. Besides, the time generally taken in such acts would never be missed; it is fragments of leisure about the season of meals, or stormy days, when nothing else would be done. With such habits of attention to the farming implements, and to the

various fixtures on the premises, whenever a job of work is to be undertaken, no delay is caused by the want of instruments with which to effect it. This is the secret why some farmers get along with their labor so much better than their neighbors. They do not wait a day before beginning any specified operation, in going after a carpenter, a wheelwright, nor a blacksmith, after the laborers are personally ready to engage in it.—*Blake's Farmer's Every-day Book.*

Salt.

A subscriber asks, "What is the use of salt, why not discontinue its use to stock?" This question is not new, either theoretically or practically. It is not necessary to go into any extended discussion of the subject, since we apprehend that too simple facts ought to decide it, were there are no others; which is not the case. These facts are, that salt is a constituent of the blood of men and animals. This would show that there must be a constant and universal demand for it in the system, from some quarter; and though it might be elaborated from its elements in some other form, in cases of necessity, yet it admits of no doubt that the simpler and easier mode of supplying it, is that commonly practiced. The other fact is, that the taste for it among men and animals is universal, or so nearly so that all cases to the contrary are merely exceptions. This is a fact which ought not to be slighted. Animals do not universally take to eating that which is poisonous or useless to them. Nature is a pretty sure guide to those who from necessity are obliged to depend upon her directions. Thus the *a priori* reasons are for its use, and so conclusive are they to us, that we should about as soon think of debating whether it would not be as well to dispense with the use of water.

But there is at this time a good deal of investigation in process among medical men into the diseases of the west—how far they may be owing to deficiency of salt in the system. A late Medical Journal, published in this city, gives several cases of cure of different forms of disease by the use of salt. The diseases alluded to are dysentery, typhoid and intermittent fevers. Some of them were remedied permanently by the salt alone, and others by it associated with other curatives. The known use of salt as a curative operating upon the blood is in perfecting and preserving its globules, which in many forms of disease are disintegrated. It would seem, indeed, to deserve investigation, whether the dreaded scourge which creeps along our rivers annually, the cholera, may not be of the nature of diseases, for which the use of

this article may be found either a preventive or in some degree a remedy.

If salt may be used as a curative agent for our western diseases, it would seem to be indicated that its proper use would prevent many of them. We believe it is a fact that such diseases among cattle as bloody murrain, quarter ail, &c., are known to be prevented extensively by a free use of salt.—Our advice—if it is proper that we give it—is that salt be supplied to all farm stock plentifully and constantly; and that it be used sufficiently in the house, and especially in the food of children.—*Prairie Farmer.*

Staining Wood.

Wood is stained by the application of any of the ordinary liquid dyes employed for wool or cotton. They sink deeper into the wood when applied hot. When the surface is properly stained, and dried, it is commonly cleaned with a rag dipped in oil or turpentine, after which it is varnished and polished. Pale colored woods are stained in imitation of ebony by washing them with, or steeping them in, a strong decoction of logwood or galls, allowing them to dry, and then washing them over with a solution of the sulphate or the acetate of iron. When dry, wash with clear water, and repeat the process if desired. Mahogany stain: logwood, two ounces; Madder, eight ounces; fustic, one ounce; boil two hours and apply several times to the wood boiling hot; when dry slightly brush over with a solution of pearlsh, one ounce in one quart of water; finish off when dry with wax or oil tinged alkanet. The wood may be previously washed over with strong aquafortis, and when dry, the following stain used: Pure socotrine aloes, one ounce; dragon's blood, half an ounce; rectified spirit, one pint; dissolve and apply two or three coats to the surface of the wood; finish off as above.—*Artisan.*

The Plantation Garden.—Planters! choose this month, whether you will feed your negroes on good Vegetables, or Calomel and Quinine. As the warm season approaches, the system craves vegetable food, and in a country with a climate like ours vegetable food should be the principal diet in the Summer months, as well for the negro as the white man. Squashes, Beets, Beans, Peas, Cabbage, (not Collard,) Okra, Onions, &c. &c., are as cheap food, when made in their greatest perfection, as salt meat and corn bread, and a constant and liberal supply of them infinitely more healthy.

The Plantation Garden should be the most prominent place about the plantation. Make it the interest of the negroes to keep it up to a high state of fertility, and without the loss of time on their part, it would soon rival "master's." We are happy to know there are such in this vicinity.

ity, and hope to see the day, not far off, when the master will find it his interest to provide a suitable Garden spot, and the best of seed, for his negroes.—*Soil of the South, for February.*

Gripes in Horses. An English writer says, that we never need lose a horse by this disease, provided we administer, when first attacked, one ounce each of spirits of nitre and paragonie in a quart of warm water. We have faith in the remedy, and have employed it successfully.

Bots in Horses.

A friend gives us the following receipt for Bots: which he has known to cure in many cases:

RECIPT.—One table-spoon full of each gun powder, table-salt and flour. Mix well. Scarify the inside of the upper lip, and rub the mixture well over the scarified surface.

A Queer Remedy for Choked Cattle.—Our neighbor, F. Wingate, Esq., gives the following singular remedy for choked cattle, viz:—Take up the fore foot of the animal, and pull its leg suddenly and forcibly forward to a horizontal position, when the animal will gulp up the substance with which it is choked. Mr. W. says he tried it once with success. We would like to see a good many successful experiments of the kind before undertaking to explain the "why and because" of it.—*Saturday Gazette.*

Lime for Peach Trees.—Repeated instances have been related of the renovating effects of lime applied to the roots of peach trees.—*Ibid.*

MARIETTA, Ga., Feb. 24, 1853.

MESSRS. EDITORS:—Enclosed you will find two dollars, please acknowledge its receipt. I anxiously await the arrival of your most excellent paper, and devour its contents instant. No farmer should be without it, and unless it deteriorates (a result which I cannot anticipate for its progression has been great and rapid) I expect to take it while I continue a practical farmer.

Should Dr. Broyles send one or more of his sub-soil plows to Marietta, I think he might find sale for them, we have many intelligent and wealthy planters in this part of the State who purchase northern plows, and know not that a southern plow, superior to them all, can be obtained. Should the cost be less or not more than that of northern ones, and should it prove simple in construction and durable, he might find a ready market. I wish I had one of them, but as I cannot at this moment command the rhino, I must use a little self denial.

I made last year, solely with water culture, on less than five acres, two hundred and fifty bushels of rice—shall plant this year ten acres. B. D. DuP.

REMARKS.—To our friend, and old neighbor, the Rev. B. D. DuP., who has our thanks for his kind letter, we would say that Dr. Broyles

does not manufacture his sub-soil plow, except for his own use. They are made by Messrs. Gailard & Sloans at Pendleton, S. C., and when called for promptly sent to any place designated. They are not sent without an order. They are as our friend remarks superior to any northern sub-soil plow we have seen. This was proven on trial by a committee of the Pendleton Farmers' Society—of which committee the lamented J. C. Calhoun, surely no ordinary judge of such matters, acted as chairman. They are also much cheaper, not costing more than half the price of a Ruggles & Co.'s sub-soil. They are sold here at \$3.50. No castings about them, consequently, when worn may be re-laid by any good smith. A. M. Benson, of Hamburg, is agent for the sale of the Broyles plow.—*Eds.*

Enquiries and Answers.

MESSRS. EDITORS:—In travelling through the neighborhood of Old Pendleton, not long since, we passed by a farm some few miles from the village, which we were informed by a man whom we had just overtaken, belonged to one of the editors of the Farmer and Planter, who he said was ruining his land, and would kill up all his horses with those infernal turning plows, which he had sent all the way to Baltimore for, and which cost him eight or ten dollars; and for his part he wouldn't give one bull-tongue for as many on 'em as could stand in a ten acre field.—That he was an overseer himself, and ought to know something about plowing. We asked him if he did not think that such plowing we had just seen in an old field that we had passed would improve the land? His answer was, no, I'll be d—d if them plows will ever make manure. (a) I had observed that the plowing was unusual for your section of country, having been done by a handsomely turning plow, drawn by two stout mules, which plow was followed by a sub-soil. But knowing the foolish prejudices of ignorant overseers—many of whom are opposed to all improvements in plows or other agricultural implements, as we found this wiseacre in his own conceit, to be, we were disposed to humor his prejudices, and asked him many questions relative to plowing, hill-side ditching, &c., the answers to all of which were amusing enough, I assure you.

But, Messrs. Editors, my principle object in writing this communication, is to enquire of you what plow you were using on the occasion referred to, for I was much pleased with its work. The overseer said he had heard the name of the thing, but could not recollect it. Is it wrought, or cast? and if the latter will it do for our sandy land at the south, at the price? (b) Again, what sub-soil plow were you using? I noticed it worked on a common shovel plow stock. The overseer said it was a narrow bull-tongue, and if

it was not as long as his arm would do well enough without the turning plow. (c) I regret that I did not enquire whose business he superintended, and whether his employeer used such plows, which I more than suspect he does. We would furthermore, enquire what is your experience with guano. We presume you have used it, —the overseer informed us you had bought some kind of truck last year, and that you made right good corn with it for the land, even when it had been broken up with that same turning plow. (d)

But I fear I am taxing you too heavily with my enquiries. Excuse the liberty I have taken to joke you about plowing with that "infernal plow," a description of which, by me, to a good farmer has, however, given you a new subscriber to the Farmer and Planter. For the enclosed, you will please send to — of — and oblige

Your friend, B.

Feb., 1853.

REMARKS.—There is an old but homely saying that a "fool's bow is soon shot." It is lamentably true that too many of the overseers in the south, know less about the proper management of a farm, or of the true principles of agriculture, than do many of the slaves over whom they are placed. Such are a dead weight to all improvements or innovations on old customs. What was known and done by their ancestors for generations gone, has been regularly handed down to them, and that and no other way is the right one. We say too many of them, for we by no means include all that follow the business of overseeing. We know of some who are right to the reverse—reading, reflecting men—subscribers to agricultural papers, and ready at all times to embrace any improvement, either in implements or modes of culture. Such men are a most useful class of the community, and of great advantage to their oftentimes less informed employers. But an ignorant, anti-improvement, self-conceited mule, the Lord deliver us from. They are hard cases we know from experience.

(a). Had your man sense enough to comprehend what our crops require to perfect them; that when the soil becomes exhausted, or deficient in those constituents they may find in the subsoil; that the larger the pasture the more food for the plant, he would not have perpetrated his foolish remark respecting the making manure by the plow. We doubt whether he ever made and applied as much manure as on as he may have overseen, unless forced to do so by a better informed employer, as a single plowing, such as he was condemning, would develop in one year. Such men have no time to make manure—to plow deep, or hill-side ditch, but say to them, clear new land and then skin it, and they are your man—at home, right where left by their ancestors.

(b). The plow that we were then using, was

either the "Hill-side" or Ruggles & Norse's 'Centre draught, self-sharp'ner, No. 30,'—the latter most probably—both of which are excellent plows. They are of cast iron (except the stock), which is our greatest objection to them, as they wear rapidly, and not unfrequently break, on our stony and sandy lands, and it is inconvenient and oftentimes impossible to procure new points and shears just at the time wanted. We have found that a point of No. 30 plow will not last, on such land as you saw them at work, to plow more than two acres till they are worn out and useless. If the points, &c., were of wrought iron or steel, it would be a great improvement on them, for then when worn we could have them renewed at our own smith's shop, and at less expense and trouble than attends the buying of new ones. We can't, upon the whole, say that they are cheap plows. We saw recently two plows sent to one of our neighbors, which, if they do good work, would be far preferable to any cast plow, and ought not to cost more than the latter now does. We could not ascertain the price. The metal part of these plows are said to be entirely of wrought-steel, even the mould board. They are manufactured in Indiana.

(c) The subsoil plow you saw in use, was a narrow bull-tongue made of thick bar iron 1½ to 2 inches wide with an oblique cutting edge instead of a point, as is usual. They are worked on a common plow stock, and should be made long enough, not only to penetrate the ground deeply, but above the bolt hole to extend a half inch above the rod or false coulter, which latter should pass through a square notch cut in the centre of the upper end, this keeps it steady on the foot of the stock, without too great strain on the bolt. We have found this a convenient sub-soiler, easily kept in order by laying with steel. It does good work with one horse, especially in following after another plow in the first plowing of the corn crop. For deep, heavy plowing it is not equal to the Broyles plow.

(d) For our experiment with guano and plaster, see the Feb. No. of the Farmer and Planter, with the error as to quantity corrected in this number. If not disappointed in procuring it in time, we intend making an experiment with a ton of guano and Kettlewell's fertilizing salts on a part of our next crop, when you shall again hear from us friend B., and knowing how well you enjoyed what you pumped out of the overseer we should have been pleased to have been present *in cog.* to have partaken of the feast. It is nothing new or strange to us, however, we are oftentimes bored by such men, for our 'book farming notions.'

In conclusion accept our thanks for the new subscriber. We will try to search out your overseer and as a sort of punishment send him to that man for employment the next year who we are right sure will disappoint him.—Eds. F. & P.

Gravel is the only thing fit to cart upon roads. Never apply loam.

Application of Guano—Error Corrected.

In our article on the subject of the application of guano, (February number F. & P.) not having our notes before us at the time, we stated from recollection the quantity of compost applied to the hill to be one gill; on referring to our notes since, we find it should have been a half pint, which was the quantity applied instead of a gill.—Eds. F. & P.

Errata.

We are requested by the writer to correct some errors the two articles from in the Unionville Journal which appeared in our February No., over the signature of "Seedling" and "Lemna." Most of the errors, we find, were in the copy. If our friend will communicate directly to the Farmer and Planter we will promise him a better showing; and we shall be much pleased to hear from him whenever the spirit may move him to write on the interesting subject of Fruit Culture South. We want more light on this subject and we believe he is very capable of dispensing it. We extract from his letter, the whole of which we should been pleased to have published, the following:

"Among the many errata to be found in those articles there are two to which I hope you will do me the favor to call attention in your next number: "Bland Madeira" for Blond Madeira, and "less than two years," for less than six years. "Baird of Eren," "favorable emblem," "Sam. Harlam," (irreverent as was the leaving out the "Uncle," by your printer,) and a host of others must stand as they are."

Morgan Horses.

We invite the attention to our readers especially such as desire to raise good stock, to the advertisement of Mr. Creswell on our advertising sheet. Hear what Mr. Jewett, most reliable authority on such matters, says of the Morgan horse:

"I believe the Morgan blood to be the best that was ever infused into the "Northern horse." They are well known, and are esteemed for activity, hardihood, gentleness and docility, throughout the New England States; well adapted for all work; good in every spot, except for racers on the turf.—They are lively and spirited, lofty and elegant in their actions, carrying themselves gracefully in the harness. They have size proportioned to height; bone clean, sinewy legs, compactness, short strong backs; powerful lungs, strength and endurance. A mixture of the Morgan blood, though small may be easily known from any other stock in the country. There is a remarkable similarity prevailing in all this race. They are known by their short lean heads, wide across the face at the eyes; eyes lively and prominent; open and wide in the under jaws, large wind pipe, deep brisket, heavy and round in the body, broad in the back, short limbs in proportion to the size, broad quarters, a lively quick action, indomitable

spirit, move true, and easy in a good round trot, fast on the walk. Color, dark bay, chestnut, brown, with dark flowing wavy mane and tail; head up, and moves without a whip; about fifteen hands high; action powerful and spirited.

They are highly celebrated for general usefulness, make the best roadsters, and live to a great age. In fact they are the perfect "Yankee harness horse."

The Morgans are very like the noble Arab, with similar eyes, upright ears, high withers, powerful quarters, hocks well placed under their weight, vigorous arms and flat legs short from the knee to the pastern, close jointed, possessing immense power for their size, with great fire and courage. But a few of the Morgans, however, evince extraordinary speed."

Pickling Beef, or other Meat

MESSRS. EDITORS:—I see a call on you, in your July number, from Mr. Jenkins of Montgomery, Ala., for the best mode of pickling beef. I see you have answered the call, by giving a three weeks' process. Why, sirs, we in the pine hills can't have patience to look at a piece of beef three weeks before getting a chance to eat it.

I will give you a process by which you can preserve your beef, mutton, or venison, and keep eating it all the time, and it will remain free from any taint, as I have never lost a piece in my life.

Take all the bone out of the meat, cut in pieces of from one to two inches thick.—Take cold spring or well water and put it in a clean tub, then put in the salt and stir as long as it will dissolve, adding a little more. Then put your meat in and let it remain some 24 hours. Then renew the brine again, (throwing the old on a compost heap so as to suffer no loss,) in the manner above described, cleansing the tub well and adding more salt than the water will dissolve, to supply that which may be taken up by the meat. Beef, mutton, or venison may be preserved in the above manner.

E. F. POTTS.

—Southern Cultivator.

To take fresh Paint out of a Coat.—Take immediately a piece of cloth, and rub the wrong side of it on the paint spot. If no other cloth is at hand a part of the inside of the coat skirt will do. This simple application will generally remove the paint when quite fresh. Otherwise rub some ether on the spot with your finger.

Weave.—These troublesome pests may be kept out of grain by using salt. Sprinkle a little fine salt on the bottom and around the sides of the bin as you fill up, and over the top when full. Wheat kept in old salt barrels will never be destroyed by the weavels.